REMARKS

No new matter has been added.

The Examiner is requested to call the undersigned if any questions arise concerning the above-mentioned application.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specificati n

The section entitled "RELATED APPLICATION DATA," page 1, line 7, is amended as follows:

RELATED APPLICATION DATA

This application is a continuation of, and claims priority to, US Provisional Patent Application 60/223,824 filed August [9] 8, 2000.

Page 1, beginning at line 11 is amended as follows:

CROSS REFERENCE TO RELATED APPLICATIONS

This application relates to the following US patent applications, all commonly assigned to the assignee of this application.

Serial No.	Atty. Dkt. No.	Title	Filed
09/676,147	2705-128	Fully Distributed, [Scalable Interface] Scalable Infrastructure Communication System	9/29/00
[09/710,544]	[2705-138]	[Net Lurkers]	[11/8/00]
09/711,378	2705-139	Replication of a [Scalable Interface] Scalable Infrastructure System	11/9/00
09/695,750	2705-140	Object Agents in a [Scalable Interface] Scalable Infrastructure System	10/24/00
09/746,798	2705-141	Memory Management of a [Scalable Interface] Scalable Infrastructure System	12/20/00
09/694,740	2705-142	Interconnective Agents in a [Scalable Interface] Scalable Infrastructure System	10/23/00
09/713,155	2705-143	Multicasting and Joining in a [Scalable Interface] Scalable Infrastructure System	11/14/00
09/697,821	2705-144	[Scalable Interface] Scalable Infrastructure Community Service	10/26/00
09/882,221	2705-187	Net Lurkers	6/15/01

The section entitled "FIELD" page 1, line 15, is amended as follows: :

FIELD

This invention pertains to object routing and, more particularly, to object routing in a [Scalable Interface] Scalable Infrastructure system.

The paragraph starting on page 2, line 25, is amended as f ll ws:

The Smart Secretary is an agent of the [Scalable Interface] Scalable Infrastructure system designed to route objects according to a user's preferences. When the [Scalable Interface] Scalable Infrastructure system notifies the Smart Secretary that an object exists in the space for the Smart Secretary, the Smart Secretary picks up the object. The Smart Secretary then determines for which user the object is destined and accesses the user's preference settings. (A default preference setting specifies that the object is to routed only according to the directions enclosed with the object.) The Smart Secretary then routes the object according to the user's preference settings, even if they override the specified destination included with the object.

The paragraph starting on page 3, line 8, is amended as follows:

FIG. 2 shows a [Scalable Interface] Scalable Infrastructure system in which a Smart Secretary according to the preferred embodiment of the invention can operate.

The paragraph starting on page 3, line 23, is been amended as follows:

In FIG. 1, computer system 105 is connected to network 130 via network connection 135. A [Scalable Interface] Scalable Infrastructure system for use in distributed communication systems as described in U.S. Patent Application Serial No. 09/676,147, titled "Fully Distributed, [Scalable Interface] Scalable Infrastructure, Communication System," filed September 29, 2000, operates over network 130. Smart Secretary, running on computer system 105, is part of the [Scalable Interface] Scalable Infrastructure system. The following material is drawn from U.S. Patent Application Serial No. 09/676,147, titled "Fully Distributed, [Scalable Interface] Scalable Infrastructure, Communication System," filed September 29, 2000:

The paragraph starting n page 3, line 30, is amended as f ll ws:

The [Scalable Interface] Scalable Infrastructure system uses a combination of a persistent store and agents to provide a communication system extensible to nearly all types of interfaces and any number of users and applications. The [Scalable Interface] Scalable Infrastructure system defines Communities around the persistent store, or space, with space or non-space oriented interpreters, referred to here as Double Agents. Double Agents will be discussed in more detail further.

The paragraph starting on page 4, line 3, is amended as follows:

A Community as used here will refer to a collection of these agents and a persistent store. Any type of persistent store could be used, with the capabilities of having objects inserted into the store such that they do not lose their attributes and of providing a notification service as the objects are inserted. In this particular example, JavaSpaces™ [technology] will be used as the persistent stores, but the [Scalable Interface] Scalable Infrastructure system is applicable to any similar technology. For ease of discussion, the persistent stores will be referred to as "Spaces." Spaces can be used in several different implementations, and the following discussion is meant only as an example.

The paragraph starting on page 5, line 23, is been amended as follows:

FIG. 2 shows a [Scalable Interface] Scalable Infrastructure system in which a Smart Secretary according to the preferred embodiment of the invention can operate. In FIG. 2, [Scalable Interface] Scalable Infrastructure system 205 includes two spaces, 210-1 and 210-2. However, a person skilled in the art will recognize that there can be more or fewer spaces in [Scalable Interface] Scalable Infrastructure system 205. A smart secretary object 215 has been dropped in space 210-1 (perhaps by a Double Agent for a telephone: see FIG. 4). [Scalable Interface] Scalable Infrastructure system 205 alerts Smart Secretary 220-1 that a smart secretary object has been dropped in space 210-1. In FIG. 2, the fact that object 215 is

a smart secretary object is graphically represented by the arched shape of the object, designed to match cutout 225 of Smart Secretary 220-1, but a person skilled in the art will recognize that this is simply a visual convenience. Smart Secretary 220-1 accesses smart secretary object 215 and determines (from the contents of smart secretary object 215) the user for which smart secretary object 215 is destined. Smart Secretary 220-1 then checks to see if registration entry 230 exists for the user for which the smart secretary object 215 is destined. If registration entry 230 exists, then Smart Secretary 220-1 accesses that user's preference setting 235 (if the user has not provided a preference setting, Smart Secretary 220-1 routes smart secretary object 215 using default routing). (Preference settings will be explained more with reference to FIG. 4 below.) Smart Secretary 220-1 can then route the communication wrapped in smart secretary object 215 according to the appropriate preference settings.

The paragraph starting on page 6, line 8, is amended as follows:

A person skilled in the art will recognize that there can be more than one Smart Secretary in [Scalable Interface] Scalable Infrastructure system 205. For example, in FIG. 2, there are three Smart Secretaries 220-1, 220-2, and 220-3. Any of these Smart Secretaries can receive the notice from [Scalable Interface] Scalable Infrastructure system 205 of smart secretary object 215 and respond to it.

The paragraph starting on page 6, line 8, is amended as follows:

Because Smart Secretary processes objects on behalf of sources, Smart Secretary is effectively an agent for the source. But Smart Secretary 220-1 is a part of the [Scalable Interface] Scalable Infrastructure system and otherwise separate from any source that causes a smart secretary object to be dropped into space 210-1. The use of the term "agent" should not be considered to tie Smart Secretary to a particular object source.

The paragraph starting on page 6, line 17, is amended as f ll ws:

FIGs. 3A-3C shows a flowchart of the method used by the Smart Secretary of FIG. 2 for routing objects. At step 305, the Smart Secretary receives a notice from the [Scalable Interface] Scalable Infrastructure system that a smart secretary object exists in the space. At step 310, the Smart Secretary accesses the smart secretary object from the space. At step 315, the Smart Secretary checks to see if the recipient is a registered user in the Scalable Infrastructure system. If the recipient is not registered, then at step 320 the object is routed using default routing (i.e., the object is sent to the specified destination without change). Otherwise, at step 325, the Smart Secretary checks to see how many possible routing destinations are included in the user preference settings. If only one routing destination is included in the user preference settings, then at step 330 the smart secretary object is routed to the listed destination. (The smart secretary wrapper is also removed from the object and the object is wrapped in the appropriate wrapper for the routing destination.)

The paragraph starting on page 6, line 29, is amended as follows:

If there is more than one possible destination for the object, then at step 335, the Smart Secretary checks to see how the object is to be routed through the destinations. If the object is to be routed using sequential delivery, at step 340, the routing destinations are ordered. The object loses its smart secretary wrapper and is wrapped with a sequence wrapper, which includes the ordered list of routing destinations. Then, at step 345, the sequence object is then dropped into the space for a sequence object to try to route the object to the destinations in order. Otherwise, if the object is to be broadcast to the destinations, then at step 350 the destinations are identified, and at step 355 a broadcast object is placed in the space to broadcast the object to the destinations. As with sequential routing, the object loses its smart secretary wrapper and is wrapped with a broadcast wrapper. Additional information about the broadcast agent can be found in U.S. Patent Application Serial No.

09/713,155, titled "Multicasting and Joining in a [Scalable Interface] Scalable Infrastructure System," filed November 14, 2000.

The paragraph starting on page 7, line 9, is amended as follows:

Now that the operation of the Smart Secretary has been explained, its use can be described. FIG. 4 shows telephones and voicemail connected to Communities as in FIG. 2. In FIG. 4, a caller places a call from Internet protocol (IP) telephone 405. (Although FIG. 4 demonstrates the use of Smart Secretary in the context of telephonic communication, a person skilled in the art will recognize that Smart Secretary is extensible beyond telephonic communication: for example, computer communication across an internetwork, either local, wide-area, or global.) Double Agent 410 translates the data from IP telephone 405 into objects understandable by [Scalable Interface] Scalable Infrastructure system 415-1 (such as [Scalable Interface] Scalable Infrastructure system 205 of FIG. 2). The caller may be calling IP telephones 420 or 425 (IP telephones on the same [Scalable Interface] Scalable Infrastructure system), IP telephone 430 (an IP telephone on a different [Scalable Interface] Scalable Infrastructure system, such as [Scalable Interface] Scalable Infrastructure system 415-2), or a regular telephone, such as telephone 435, accessible via private branch exchange (PBX) 440. Because they are part of Communities, Double Agent 445 and 450 interface between IP telephones 420 and 425, respectively and [Scalable Interface] Scalable Infrastructure system 415-1; similarly, Double Agent 455 interfaces between IP telephone 430 and [Scalable Interface] Scalable Infrastructure system 415-2.

The paragraph starting on page 7, line 24, is amended as follows:

For purposes of FIG. 4, assume that the called telephone is IP telephone 420. When the user dials IP telephone 420 from IP telephone 405, Double Agent 410 drops a smart secretary object in the space within [Scalable Interface] Scalable Infrastructure system 415-1. The smart secretary object (naturally) includes the dialed telephone number, which the Smart

Secretary uses to determine the intended recipient. After determining the intended recipient, the Smart Secretary accesses the callee's preference settings.

The paragraph starting n page 8, line 12, is amended as f ll ws:

If the manager works out of multiple offices, he can set his preferences to ring each of his phones in turn, until someone picks up. So, in the above example, if the manager alternates between IP telephones 420 and 430 (for example, IP telephone 420 in Los Angeles and IP telephone 430 in New York City), IP telephone 420 can be set to ring first, then IP telephone 430, then the manager's assistant's IP telephone 425, and finally voicemail 460, until someone takes the call. Note that the fact that IP telephones 420, 430, and 425 are part of different Communities does not affect the preference setting: transfer of a call between Communities 415-1 and 415-2 is handled seamlessly. See related U.S. Patent Application Serial No. 09/694,740, titled "Interconnective Agents in a [Scalable Interface] Scalable Infrastructure System," filed October 23, 2000, for more information about transferring communications between Communities.

The paragraph starting on page 8, line 22, is amended as follows:

Finally, if the callee spends his time at telephone 435, which is not connected to a [Scalable Interface] Scalable Infrastructure system (for example, the callee can be out in the field with only a cellular or satellite telephone for receiving calls), the callee can set his preference settings to forward calls to telephone 435. The fact that calls to telephone 435 must pass through PBX 440 does not affect the operation of Smart Secretary.

In the Drawings

In FIG. 3A and FIG. 4, the words "Scalable Interface" are amended to "Scalable Infrastructure" as shown on the attached redlined drawings.

In the Claims

1. A message-processing agent operable in a [Scalable Interface] Scalable Infrastructure system, the message-processing agent comprising:

a receiver designed to receive an object from a space in the [Scalable Interface] Scalable Infrastructure system;

a default routing identifying a destination for the object; and

a routing module designed to route the object to the destination.

13. A method for using a message-processing agent to process an object in a space in a [Scalable Interface] Scalable Infrastructure system, the method comprising:

receiving an object;

accessing a preference setting; and

routing the object according to the preference setting.

14. A method according to claim 13, wherein receiving an object includes receiving notice of the object from the space in the [Scalable Interface] Scalable Infrastructure system.

17. A method according to claim 16, wherein selecting a user preference setting includes checking to see if the ultimate recipient of the object is registered with the [Scalable Interface] Scalable Infrastructure system.

20. A method according to claim 13, wherein routing the object includes:

determining at least two destinations for the object; and

placing a sequence object in the space in the [Scalable Interface] Scalable Infrastructure system for a sequence agent to sequentially route the object to each destination for the object until the object is received.

21. A method according to claim 13, wherein routing the object includes:

determining at least two destinations for the object; and

placing a broadcast object in the space in the [Scalable Interface] Scalable Infrastructure system for a broadcast agent to broadcast the object to each destination for the object until the object is received.

22. A computer-readable medium containing a program to use a message-processing agent to process an object in a space in a [Scalable Interface] Scalable Infrastructure system, the program comprising:

receiving software to receive the object;

accessing software to access a preference setting; and

routing software to route the object according to the preference setting.

23. A computer-readable medium according to claim 22, wherein the receiving software includes receiving software to receive notice of the object from the space in the [Scalable Interface] Scalable Infrastructure system.

26. A computer-readable medium according to claim 25, wherein the selection software includes checking software to check if the ultimate recipient of the object is registered with the [Scalable Interface] Scalable Infrastructure system.

29. A computer-readable medium according to claim 22, wherein the routing software includes:

determination software to determine at least two destinations for the object; and

placing software to place a sequence object in the space in the [Scalable Interface] Scalable Infrastructure system for a sequence agent to sequentially route the object to each destination for the object until the object is received.

30. A computer-readable medium according to claim 22, wherein the routing software includes:

determination software to determine at least two destinations for the object; and

placing software to place a broadcast object in the space in the [Scalable Interface] Scalable Infrastructure system for a broadcast agent to broadcast the object to each destination for the object until the object is received.

31. A message-processing agent operable in a [Scalable Interface] Scalable Infrastructure system, the message-processing agent comprising:

means for receiving for receive the object;

means for accessing a preference setting; and

means for routing the object according to the preference setting.

32. A method according to claim 31, wherein the means for receiving includes means for receiving notice of the object from the space in the [Scalable Interface] Scalable Infrastructure system.

35. A method according to claim 34, wherein the second means for selecting includes means for checking to see if the ultimate recipient of the object is registered with the [Scalable Interface] Scalable Infrastructure system.

38. A method according to claim 31, wherein the means for routing includes:

means for determining at least two destinations for the object; and

means for placing a sequence object in the space in the [Scalable Interface] Scalable Infrastructure system for a sequence agent to sequentially route the object to each destination for the object until the object is received.

39. A method according to claim 31, wherein the means for routing includes:

means for determining at least two destinations for the object; and

means for placing a broadcast object in the space in the [Scalable Interface] Scalable Infrastructure system for a broadcast agent to broadcast the object to each destination for the object until the object is received.